



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

RBW6305G13731-3G
Job Sheet 172401



Al16

Part No: RBW6305G13731-3G

Job Qty: 3 ea

Part Name: Gimball Carbon Seal Remover



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 2/16/18

Job Tracking No:

Due Date: 4/16/18

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG RBW6305G13731-3G Rev 2 IPP Rev A 18.02.15 New issue DP Verify DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Purchasing	3 pcs		4/16/18	0.00	0.00	Purchasing		<i>At 18/04/20</i>
110	Packaging	3 pcs		4/16/18	0.00	0.00	Packaging2		<i>At 18/09/20</i>
120	QC	3 pcs		4/16/18	0.00	0.00	QC6		<i>38</i>
130	Packaging	3 pcs		4/16/18	0.00	0.00	Packaging3	<i>DAS</i>	<i>APR 27 2018</i>
140	QC21-FG	3 Ea		4/16/18	0.00	0.00	QC21	<i>21</i>	<i>APR 27 2018</i>

Part Op 100 - Issue PO to ARROW TECH MACHINE WORKS P/O: *039084* MANUFACTURE RBW6305G13731-3G AS PER
Descriptions: DWG -Certificate of conformity is required
FEB 22 2018 *GA115* *DOB*

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
RBW6305G13731-3GP	Gimball Carbon Seal Remover	3 (1 ea)	100-Purchasing	<i>5065875</i>

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Purchasing	RBW6305G13731-3GP	3	0	0

Part Specifications

Specifications could not be found.

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION		AGAINST DEPARTMENT/PROCESS					
	Rework ☐	Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐			
	Scrap ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐			
	Use-as-is ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐			
	Suspected Unapproved ☐	Large Fab ☐	Composite ☐	Supplier ☐				

Date : _____

MRB (QSI042) Approval

Description : _____

 Job No: 172401
 Mfg Date: 04/26/18

Packaging

Change No: _____

Operation: _____

Revision: _____

Serial No/Batch: S065876

PART NO: RBW6305G13731 - 3G

Gimball Carbon Seal Remover



Container No: S065876


 Dart Aerospace Ltd.
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 CANADA
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 www.dartaerospace.com

Root Cause

Environment ☐	No Re-verifica ☐
Design ☐	Operator ☐
Doc/Data ☐	Offset/Setup ☐
Equip/Tooling ☐	Supplier ☐
Handling/Pre ☐	Training ☐
Material ☐	Use for Testing ☐
Internal Transport ☐	Poor Information ☐
Tribal Knowledge ☐	Rushing ☐
LOA ☐	Product Improvement ☐
Substation ☐	Process Improvement ☐
Past Expiry Date ☐	Manufacturing Process ☐
Misidentified ☐	Past Due ☐

 Crimp/Kink/Ripple/Wave ☐
 Cuffs ☐
 Crushing ☐
 Heat Treat ☐
 Wave/Twist in Tube ☐
 Marks/Chatter ☐

 Inspection Incomplete/Unqualified ☐
 Contamination ☐
 Countersink ☐
 Cut Too Short ☐
 Instructions Incomplete/Unclear ☐
 Drill Holes ☐

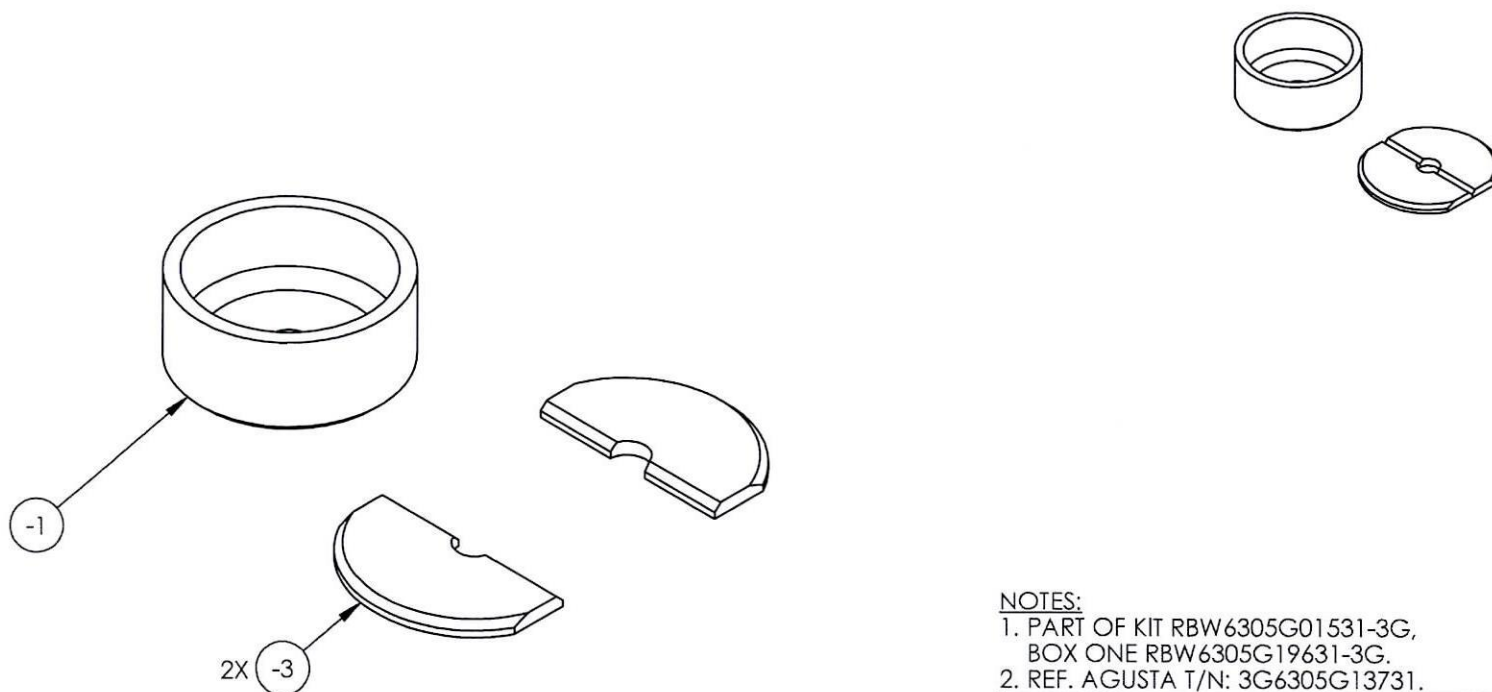
 Wrong Stock Pulled ☐
 Out of Sequence ☐
 Off-set ☐
 Misabeled ☐
 Fit/Function ☐
 Misaligned/off center ☐

 Positioned Wrong ☐
 Outside Dimensions ☐
 Over/Under tolerance ☐
 Part Incorrect ☐
 Part Lost/Missing ☐
 Part Moved ☐
 Drawing ☐
 Finish ☐
 Misread ☐
 Turning Sequence ☐

OTHER : _____

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
A		CH'D -1 ENGRAVE NOTES, ADDED MISSING CHAMFER DIM., CH'D BOM INFO PER R.W.	5/6/2011	RJC	RW
B		CH'D TOOL NAME WAS GIMBAL CARBON SEAL REMOVER IS TOOL, GIMBAL CARBON SEAL REMOVER TO MATCH PARTS MANUAL	11/1/2013	RJC	RW
1		-3 CH'D MAT'L WAS 4140 FLAT BAR IS 4140 PLATE, CH'D B/O INFO WAS 3/8 IS 3/16. CH'D TOLERANCE ON NON-CRITICAL PARTS.	5/16/2014	DPD	GE
2	17-0095	UPDATED TO NEW STANDARD. -1 CH'D DIMS WAS Ø2.748 IS 2.75, WAS R.187 I SR.19, WAS .982 IS .98, WAS 1.182 IS 1.18. -3 CH'D MAT'L WAS 4140 IS 4140/4142. CH'D FINISH WAS CAD PLATE YELLOW QQ-P-416F TYPE II CLASS II IS ZINC PLATE ASTM B633 TYPE I SC2.	4/21/2017	DPD	JAG



NOTES:

1. PART OF KIT RBW6305G01531-3G, BOX ONE RBW6305G19631-3G.
2. REF. AGUSTA T/N: 3G6305G13731.

DART AEROSPACE	
TITLE TOOL, GIMBAL CARBON SEAL REMOVER	
DWG NO. RBW6305G13731-3G	REV 2
MAT'L	UNLESS OTHERWISE SPECIFIED
HEAT TREAT	DIMENSIONS ARE IN INCHES
FINISH	.XXX ± .005 FRACTIONS ± 1/8
SPEC	.XX ± .01 ANGLES ± 5°
	.X ± .1 SURFACES = 125/✓
DRAWN BY: CLOUGH	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: RJC 04/21/2017	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: AA 05/10/2017	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: JL 05/10/2017	USED ON MODEL
APPROVED: JAG 05/18/2017	AW139
SCALE 1:2	DATE 2/4/2011
SHEET 1 OF 3	

ASSY QTY	ASSY QTY	B/O	Part #	UNIT QTY	Description	Material	B/O INFORMATION OR SPECIFICATIONS	P.G.
			-1	1	CUP	6061		2
			-3	2	HALF KEEPER	4140/4142		3

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																																																										
Description Work Order Deviation				Disposition				Completed By																																																									
								Lead hand / Supervisor Approval Verification																																																									
								QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐																																																																



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PURCHASE ORDER PO039084

Items											
Line Item	Part	Supplier Part No	Item No	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
Line Item Note	job# 172405										
23	RBW6305G13731-3GP			Gimball Carbon Seal Remover As Per Dwg RBW6305G13731-3G Rev. 2	Firmed	4/16/18	3 Ea	0 Ea	3 Ea	\$362.28/Ea	\$1,086.84
							✓ 3x			AT 18/04/26	
Line Item Note	job# 172401										
24	RBW6305G13231-3GP			Gimball Carbon Seal Installer As Per Dwg RBW6305G13231-3G Rev. B	Firmed	4/16/18	3 Ea	0 Ea	3 Ea	\$984.42/Ea	\$2,953.26
Line Item Note	job# 172399										
25	RBW6305G14031-3GP			Gimball Carbon Seal Remover As Per Dwg RBW6305G14031-3G Rev. 2	Firmed	4/16/18	3 Ea	0 Ea	3 Ea	\$639.24/Ea	\$1,917.72
Line Item Note	job# 172397										
26	RBW6305G14331-3GP			Upper Module Lip Seal Installer As Per Dwg RBW6305G14331-3G Rev. 1	Firmed	4/16/18	3 Ea	0 Ea	3 Ea	\$758.42/Ea	\$2,275.26
Line Item Note	job# 172382										
27	RBW6305G18251-3GP			Guide Pumps/Ecs Drive Quill Seal Housing Installer As Per Dwg RBW6305G18251-3G Rev. A	Firmed	4/16/18	3 Ea	0 Ea	3 Ea	\$132.32/Ea	\$396.96
							✓ 3x			AT 18/04/26	
Line Item Note	job# 172381										
28	RBW6305G17631-3GP			Tool Pump 1-2-3 Drive Quill Lip Seal Remover As Per Dwg RBW6305G17631-3G Rev. B	Firmed	4/16/18	3 Ea	0 Ea	3 Ea	\$496.30/Ea	\$1,488.90
							✓ 3x			AT 18/04/26	
Line Item Note	job# 172378										
29	RBW6305G17931-3GP			Tool Pump 1-2-3 Drive Quill Lip Seal Installer As Per Dwg RBW6305G17931-3G Rev. B	Firmed	4/9/18	3 Ea	0 Ea	3 Ea	\$392.72/Ea	\$1,178.16
							✓ 3x			AT 18/04/26	
Line Item Note	job# 172377										
30	RBW6305G17131-3GP			Drive Quill Seal Housing Removal Tool As Per Dwg RBW6305G17131-3G Rev. 3	Firmed	4/16/18	3 Ea	0 Ea	3 Ea	\$905.64/Ea	\$2,716.92
							✓ 3x			AT 18/04/26	
Line Item Note	job# 172376										



ARROW TECH MACHINE WORKS

Certificate of Conformance

Your Purchase Order No: 039084 Dated: 04/24/2018

Our Order / Job No: 09AWT Order Qty: 3

Part Name: Tool, Gimbal Carbon Seal Remover

Part Number: RBW6305G13731-3G

Lot Size: N/A Ship Date: 04/24/2018

We certify that these parts shipped to you are of domestic or international manufacture and conform to all requirements of the Purchase Order. These parts have been manufactured and inspected in accordance with all required specifications, instructions and drawings. Any applicable specifications are listed below:

Drawing Number: RBW6305G13731-3G Rev:2

Material Size and Type: -1/6061 ALUM.; -3/ 4140 STEEL

Material Specifications: ALUM.- ASTM B221; STEEL- ASTM A108, ASTM A29

Heat Treatment: N/A

Plating/Finish: CLEAR ANODIZE: MIL-A-8625F, TYPE II, CLASS I; ZINC PLATE: ASTM B633 TYPE I SC 2

Mercury Contamination: The material used to process this order has not come in contact with mercury or mercury bearing instruments.

Date: 4/24/18

Signed: Herbert M. Ladd

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